Volume 142 May 1984

CONTENTS

Oscillations of a rotating liquid drop. F. H. Busse *page* 1

On the propagation of waves exhibiting both positive and negative non-linearity. M. S. Cramer and A. Kluwick 9

Turbulence spectra from viscous sublayer and buffer layer at the ocean floor. T. M. Chriss and D. R. Caldwell 39

Contaminant dispersion in some time-dependent laminar flows. C. Jimenez and P. J. Sullivan 57

Edge waves over a shelf: full linear theory. D. V. Evans and P. McIver 79

On the use of an annulus to study mixed-layer entrainment. J. W. Deardorff and S.-C. Yoon 97

Study of turbulent structure with hot wires smaller than the viscous length. William W. Willmarth and Lalit K. Sharma 121

The effect of Langmuir circulation on the distribution of submerged bubbles caused by breaking wind waves. S. A. Thorpe 151

On the stability of an axisymmetric plume in a uniform stream. D. S. Riley and M. Tveitereid 171

Investigating cavity/wake dynamics for a circular cylinder by measuring noise spectra. S. A. Fry 187

Air flow and dispersion in rough terrain: a report on Euromech 173. J. C. R. Hunt, D. P. Lalas and D. N. Asimakopoulos 201

Mixing layer produced by a screen and its dependence on initial conditions. Hakuro Oguchi and Osamu Inoue 217

Internal waves in a horizontally inhomogeneous flow. A. Ya. Basovich and L. Sh. Tsimring 233

The pressure–hole problem. C. Ducruet and A. Dyment 251

Effective viscosity of a periodic suspension. Kevin C. Nunan and Joseph B. Keller 269

Shear dispersion and residence time for laminar flow in capillary tubes. J. E. Houseworth 289

Analysis of the forced ventilation in containership holds. Howard R. Baum and John A. Rockett 309

The structures and energetics of fully nonlinear symmetric baroclinic waves. Timothy L. Miller 343

Natural convection in an inclined square cavity in regions of density inversion of water. Hideo Inaba and Takeyuki Fukuda 363

On instabilities arising during sedimentation of two-component mixtures of solids. R. H. WEILAND, Y. P. FESSAS and B. V. RAMARAO 383

Stresses developed by dry cohesionless granular materials shared in an annular shear cell. S. B. SAVAGE and M. SAYED 391

Time-dependent critical layers in shear flows on the beta-plane. FRED J. HICKERNELL 431

Three-dimensional stability of an elliptical vortex in a straining field. A. C. ROBINSON and P. G. SAFFMAN 451

REVIEWS

Solitons, by P. G. Drazin 467

Structure of Complex Turbulent Shear Flow, edited by R. Dumas and L. Fulachier 468

SHORTER NOTICES 470

INDEX TO VOLUME 142 472